

REMARKS

The application has been amended and is believed to be in condition for allowance.

Claims 1 and 3-10 were rejected as obvious over REBER et al. 5,969,606 in view of KOBAYASHI et al. 6,367,266.

Claim 2 was rejected as obvious in further view of MOSEBROOK et al. 5,736,965.

The Independent Claims

The Official Action asserts that REBER together with KOBAYASHI renders obvious the invention. Applicants respectfully disagree.

With reference to REBER Figure 1 (reproduced below), the Official Action offers the work cabinet (24) as having walls delimiting a work space adapted to receive an object (20).

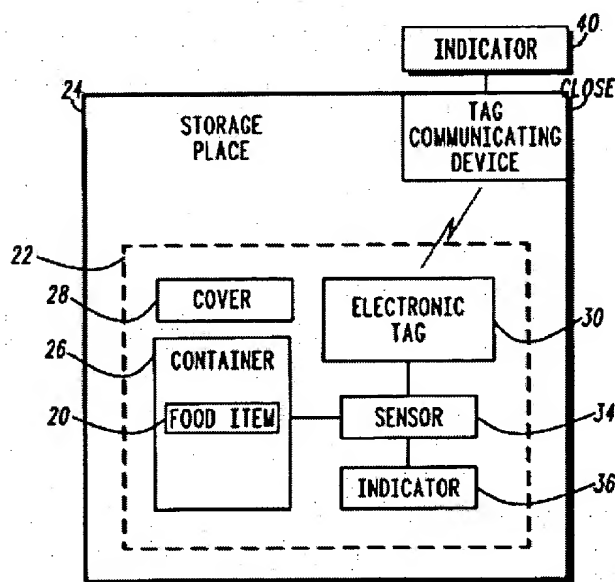


FIG. 1

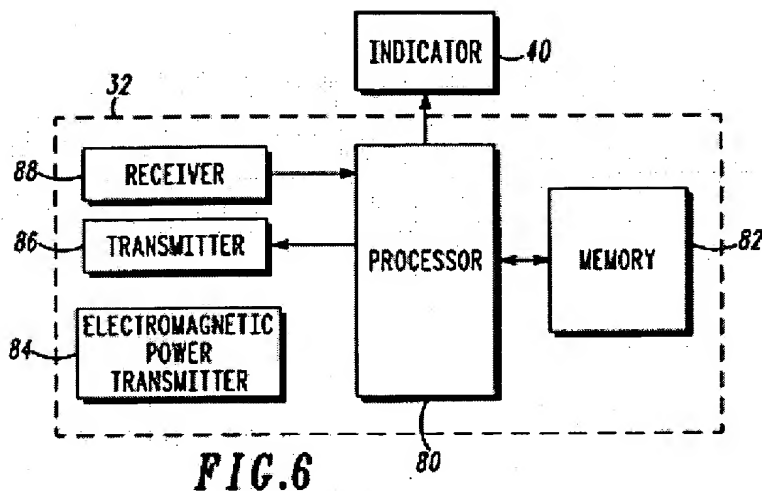
The Official Action offers the tag communicating device (which is connected to the outside indicator (40)) as the recited first communication device (Figure 1). But the tag communicating device is inside the work space.

Receiver 88 and transmitter 86 are offered as disclosing the recited antenna connected to the first communication device.

The Official Action offers the electronic tag (30), associated with the sensor (34) monitoring the object (20), as the recited second communication device located inside the work space.

See that indicator (40) is associated with the electronic tag (32) located at the upper right-hand corner within the work space (but unnumbered in Figure 1).

As noted above, for the recited antenna connected to the first communication device, the Official Action has referred to Figure 6 (reproduced below) illustrating a transmitter (86) and a receiver (88). Again, see that the transmitter and receiver are within the container work space, as would be the antenna. Thus, there are two antennas within the work space.



Thus, REBER positions the communication portions of the tag device 32 (including the antenna) within the work space and communicates to the indicator (40) via a wire (per Figures 1 and 6). This is acknowledged by the Official Action indicating that REBER fails to teach the antenna separated from the work space by the radio frequency transparent wall part.

KOBAYASHI is now offered as teaching a first communication device outside the work space and the antenna being separated from the work space by at least part of a radio frequency transparent wall. Figure 1, element 13 discloses an antenna located exterior to cabinet 12.

The Official Action states "it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Reber et al. with the [exterior antenna 13] teaching of Kobayqashi et al. in order to provide the thermal conductivity of the radio transmission path is generally

smaller [than] that of a conductor, so that heat flowing in and out between the outside and the inner chamber is suppressed as suggested by Kobayqashi et al. (see col. 2 line 65 through col.3 line 3)."

The obviousness rejection is not viable and should be withdrawn.

REBER discloses a food storage apparatus where the temperature inside the cabinet is around a few degrees Celsius, i.e., around 273°K. In contrast, KOBAYASHI discloses a cryostat where the temperature inside the cabinet is at cryogenic temperature, i.e., a few degrees K or near 0°K (see column 1, lines 25-34).

In the KOBAYASHI prior art (Figure 16), the electronic part 143 inside the cabinet was connected to the exterior via a coaxial cable 145-2 passing through a hole 144-2 within the wall of the cabinet 141 (a wire connection through the exterior wall). This created a significant heat loss due to the size of the wall opening/penetration and the high ΔT across the wall.

The teaching of KOBAYASHI is that in order to avoid thermal heat loss from the cabinet, one reduces the thermal conductivity through such wire connection penetration by replacing the wire connections by radio wave couplings (as per Figure 1).

This teaching of KOBAYASHI lacks the requisite suggestion to modify REBER as proposed by the Official Action.

A food storage apparatus of the type disclosed by REBER always has a door which is opened in order to introduce or remove the food from the apparatus. The corresponding opening within the cabinet that is associated with the door necessarily induces comparatively major heat entries into the cabinet, but this is not an issue since the temperature to be maintained in the cabinet is comparatively high (273°K).

In contrast, the thermal losses that KOBAYASHI tries to prevent are comparatively minor with respect to those necessarily associated with the door and door opening of REBER. Since one of skill dealing with REBER must accept the heat losses associated with the door and door openings, there would be no heat loss advantage which justified trying to avoid the minor heat loss associated with the small wire connecting processor 80 to indicator 40 (Figures 1, 6).

Indeed, the cabinets of KOBAYASHI and REBER are not alike, in that KOBAYASHI is a much more thermally complex cabinet and is tightly sealed in order to be maintained under vacuum. Therefore, in combination with the different temperature differences (the ΔT being maintained across the cabinet wall), the heat loss due to a coaxial cable penetrating the KOBAYASHI cabinet wall is much more significant than the heat loss associated with the wire penetrating the REBER cabinet wall.

Further, the proposed modification of REBER has no reasonable expectation of success of preventing thermal loss from

the REBER cabinet as the minor losses prevented are not significant when compared to the unavoidable losses of the door and door opening.

In view of these factors, one of skill would not modify REBER based on the teachings of KOBAYASHI. The proposed modification is merely hindsight and therefore the obviousness rejection should be withdrawn.

Still further, even if REBER were modified based on the KOBAYASHI teaching, the recited invention does not result.

At best, KOBAYASHI would teach to replace the REBER wire penetrating wall 24 and connecting to indicator 40 with a RF connection. That is, tag communicating device 32 would both receive signals from electronic tag 30 and transmit further signals through the cabinet wall.

There is no teaching in KOBAYASHI to remove the tag communicating device from the cabinet interior of REBER. In KOBAYASHI, the counterpart of the tag communicating device is the electronic part 143. Since the electronic part 143 must be maintained in the cabinet under the cryogenic temperature, KOBAYASHI makes no suggestion to place it outside the cabinet.

Thus, even if REBER were modified as taught by KOBAYASHI, the recited invention does not result.

In considering obviousness, one must be careful to avoid hindsight. The Federal Circuit has stated that, "[t]he mere fact that the prior art may be modified in the manner

suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." *In re Fritch*, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), citing *In re Gordon*, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Reconsideration and allowance of all the claims are therefore respectfully requested.

As to dependent claim 2, this rejection is also not believed to be viable. On the one hand, the Official Action urges that one of skill would want to reduce even small thermal losses by avoiding wall penetrations that contribute to such thermal losses. However, in order to justify rejecting claim 2, the Official Action states that it would be desirable to conceal the antenna within the wall. Concealing the antenna within a wall would necessarily mean that there would remain at least one wall penetration for the wire that exits the antenna through the wall. Such a wall penetration would of course contribute to thermal loss. This thermal loss is inconsistent with the argument that one of skill would want to avoid such thermal losses caused by wall penetrations.

Accordingly, it is inconsistent to say that one of skill would first want to avoid having wall penetrations in order to avoid thermal losses but would be willing to have wall penetrations in order to not view the antenna. If one of skill in the art thought the thermal losses associated with wall

penetrations were worth avoiding, especially in view of the much greater thermal losses associated with the door and the door opening, one of skill would want to minimize all wall penetrations.

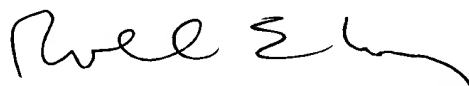
Accordingly, claim 2 is believed to be patentable in its own right. Reconsideration and allowance of claim 2 are also respectfully requested.

Applicants believe the present application is in condition for allowance and an early indication of the same is respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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